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**WANG et al.**(10) **Pub. No.: US 2021/0100122 A1**(43) **Pub. Date: Apr. 1, 2021**(54) **ELECTRONIC DEVICE WITH A  
LIQUID-ACTIVATED SEAL****Publication Classification**(51) **Int. Cl.****H05K 5/06** (2006.01)**H05K 5/00** (2006.01)**H04B 1/3888** (2006.01)(52) **U.S. Cl.**CPC ..... **H05K 5/069** (2013.01); **H05K 5/03**  
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**ABSTRACT**

An electronic device with a sealing layer is disclosed. The sealing layer may include several enhancements designed to improve the overall sealing performance. For instance, the sealing layer may include an adhesive material and several particles embedded in the adhesive material. The embedded particles may include liquid-activated particles that respond to liquid exposure. In some instances, the liquid-activated particles absorb the liquid. Additionally, the liquid-activated particles may expand and fill/cover areas previously occupied by the sealing layer or another structure of the electronic device. Further, the liquid-activated particles may adhere to one or more structures of the electronic device, thereby providing the sealing layer with sealing properties. As a result of the absorption/expansion/adhesion properties of the liquid-activated particles, the electronic device may maintain a specified ingress protection rating even subsequent to some form of breakdown of the sealing layer or damage to the electronic device.

